



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,759	02/23/2004	Hiroataka Todaka	02886.0088	7642

22852 7590 07/18/2005

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER  
LLP  
901 NEW YORK AVENUE, NW  
WASHINGTON, DC 20001-4413

EXAMINER
----------

TOLAN, EDWARD THOMAS

ART UNIT	PAPER NUMBER
----------	--------------

3725

DATE MAILED: 07/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Tolan

**Office Action Summary**

Application No.

10/782,759

Applicant(s)

TODAKA ET AL.

Examiner

Tolan Edward

Art Unit

3725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2-23-2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 12 recites the limitation "the lower punch about axis thereof" in lines 5 and 6. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,2,4-7,11 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Zhu et al. (6,197,129). Zhu discloses a method and apparatus for working a metal material (12) wherein front and rear convex-concave surfaced dies (20) are used to press the material and generate plastic strain in the material. In column 3, lines 3-7 Zhu discloses that the material is then pressed by flat dies in a second press step. Zhu discloses that the material has a thickness of ¼" (6.35mm). Regarding claims 6 and 7, from Figure 1 it appears that the pitch and cross section of the convex-

Art Unit: 3725

concave surfaces of Zhu are approximately equal to (or larger) than the thickness of the material. Regarding claim 12, Zhu discloses dies (28) that are rotatable about an axis.

Claim 12 is rejected under 35 U.S.C. 102(b) as being anticipated by Nishiguchi et al. (JP 63-235037). Nishiguchi discloses rotary front and rear dies (1,3) which press a metal material (2) in figure 2.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zhu et al. (6,197,129) in view of Adams et al. (6,502,447). Zhu does not disclose aluminum, Zhu broadly discloses a metal or metal alloy. Adams teaches (column 4, lines 36 and 37) that it is known to shape steel, brass or aluminum with convex-concave shaped surfaces. It would have been obvious to form other materials in Zhu as taught by Adams in order to produce improved materials of varying composition.

Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhu et al. (6,197,129) in view of Gerich (3,748,888). Zhu does not disclose that the convex-concave shaped surfaces diverge from an axis at an angle. Gerich teaches (figures 4 and 7, column 7, lines 2-5 and 10-14) that it is known to use convex-concave surfaces (38,43,73,74) to provide tapered shapes (28) in a material. Gerich teaches that an angle of the surfaces is selectable to produce a depth (x). It would have been obvious

Art Unit: 3725

to one skilled in the art at the time of invention to provide Zhu with convex-concave shapes as taught by Gerich in order to produce differing corrugation patterns.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication should be directed to Ed Tolan whose telephone number is 571-272-4525, FAX papers should be sent to 571-273-8300.

ED TOLAN  
PRIMARY EXAMINER

